


4-1-2016

Can Siri 10.0 Buy Your Home? The Legal and Policy Based Implications of Artificial Intelligent Robots Owning Real Property

David Marc Rothenberg

Follow this and additional works at: <https://digitalcommons.law.uw.edu/wjlta>

 Part of the [Property Law and Real Estate Commons](#), and the [Science and Technology Law Commons](#)

Recommended Citation

David M. Rothenberg, *Can Siri 10.0 Buy Your Home? The Legal and Policy Based Implications of Artificial Intelligent Robots Owning Real Property*, 11 WASH. J. L. TECH. & ARTS 439 (2016).

Available at: <https://digitalcommons.law.uw.edu/wjlta/vol11/iss5/4>

This Article is brought to you for free and open access by the Law Reviews and Journals at UW Law Digital Commons. It has been accepted for inclusion in Washington Journal of Law, Technology & Arts by an authorized editor of UW Law Digital Commons. For more information, please contact cnyberg@uw.edu.

WASHINGTON JOURNAL OF LAW, TECHNOLOGY & ARTS
VOLUME 11, ISSUE 5 SPRING 2016

CAN SIRI 10.0 BUY YOUR HOME? THE LEGAL AND POLICY
BASED IMPLICATIONS OF ARTIFICIAL INTELLIGENT
ROBOTS OWNING REAL PROPERTY

*David Marc Rothenberg**

© David Marc Rothenberg

Cite as: 11 Wash. J.L. Tech. & Arts 439 (2016)
<http://digital.law.washington.edu/dspace-law/handle/1773.1/1581>

ABSTRACT

This Article addresses whether strong artificial intelligent robots (“AI”) should receive real property rights. More than a resource, real property promotes self-respect to natural persons such as human beings. Because of this distinction, this Article argues for limited real property rights for AIs. In developing this proposition, it examines three hypotheticals of a strong AI robot in various forms of real property ownership.

The first hypothetical determines whether an AI could work as an agent in real property transactions. As robots currently act as agents in various capacities, the groundwork exists for an AI to enter this role. The second hypothetical considers whether an AI could own property in a manner similar to a corporation. In this instance, an AI would own the property in its name, but generate wealth for its shareholders and have oversight by natural persons. Corporations can acquire property as artificial persons, so too AIs could meet similar legal requirements. As such, the law should allow such ownership rights to AIs. The third hypothetical delves into whether an AI should own property

* David Marc Rothenberg, Emory University School of Law, Class of 2016. Thank you to Professor Mark Goldfeder for inspiring me to think about the crossroads of artificial intelligence and the law. Thank you to the editorial board and staffers of the *Washington Journal of Law, Technology & Arts* for their feedback and preparing my Article for publication.

outright like a natural person. After describing potential reasons for this approach, this Article explains why legal and policy-based arguments weigh against this extension of property rights to AIs. Instead, any possibility of an AI owning property like a natural person should come from Congress, not the courts.

TABLE OF CONTENTS

Introduction.....	440
I. Background.....	442
A. The Moral Theory of Real Property	443
B. Principles of Property Ownership	445
II. Ownership Scenarios for AI Robots	447
A. Facilitating Property Ownership as an Agent	448
B. Owning Property Like a Corporation.....	453
C. Owning Property Like a Human	455
Conclusion	458
Practice Pointers.....	460

INTRODUCTION

Imagine in the year 2040, Google announces a breakthrough in the field of artificial intelligence:¹ the first autonomous artificial

¹ Artificial intelligence has been advancing faster than many scientists predicted. Most recently, Google’s computer program, AlphaGo, defeated a master of the complex game called “Go.” This victory of machine over man seemed impossible less than twenty years ago but now is happening. See George Johnson, *To Beat Go Champion, Google’s Program Needed a Human Army*, N.Y. TIMES (Apr. 4, 2016), <http://www.nytimes.com/2016/04/05/science/google-alphago-artificial-intelligence.html> (“It may be a hundred years before a computer beats humans at Go—maybe even longer,’ Dr. Piet Hut, an astrophysicist and Go enthusiast at the Institute for Advanced Study in Princeton, N.J., told me in 1997 That was the prevailing wisdom.”). Mr. Johnson commented in his 1997 article that:

To play a decent game of Go, a computer must be endowed with the ability to recognize subtle, complex patterns and to draw on the kind of intuitive knowledge that is the hallmark of human intelligence . . . [and defeating a human Go champion] will be a sign that artificial intelligence is truly beginning to

intelligent robot is born.² As a strong AI, this entity is not simply a tool used to achieve some other entity's goals; rather, he possesses a mind of his own.³ The Certified Living Intelligent Valued

become as good as the real thing.

Id. Mr. Johnson realized that is not the case. *Id.* However, these technological leaps strengthen the argument that futuristic theories of artificial intelligence may arrive sooner than people could imagine. After all, defeating humans at complex board games is just the beginning for artificial intelligence. See Tom Simonite, *How Google Plans to Solve Artificial Intelligence*, MIT TECH. REV., Mar. 31, 2016, <https://www.technologyreview.com/s/601139/how-google-plans-to-solve-artificial-intelligence/>. As the leader of the team of roughly 200 computer scientists and neuroscientists at Google's DeepMind, the London-based group behind the AlphaGo software, Demis Hassabis explained that these games are early checkpoints aimed at "solving intelligence, and then using that to solve everything else." *Id.* Strong artificial intelligent robots solve the question of how to expand intelligence to non-humans.

² Debate still exists over whether a strong AI robot could ever be created. John R. Searle, *Minds, Brains and Programs*, 3 BEHAV. & BRAIN SCI. 349, 417–57 (1980); Lawrence B. Solum, *Legal Personhood for Artificial Intelligences*, 70 N.C. L. REV. 1231, 1236 (1992) ("John Searle questioned the relevance of Turing's Test with another thought experiment, which has come to be known as the Chinese Room. Imagine that you are locked in a room. Into the room come batches of Chinese writing, but you don't know any Chinese. You are, however, given a rule book, written in English, in which you can look up the bits of Chinese, by their shape. The rule book gives you a procedure for producing strings of Chinese characters that you send out of the room. Those outside the room are playing some version of Turing's game. They are convinced that whatever is in the room understands Chinese. But you don't know a word of Chinese, you are simply following a set of instructions (which we can call a program) based on the shape of Chinese symbols. Searle believes that this thought experiment demonstrates that neither you nor the instruction book (the program) understands Chinese, even though you and the program can simulate such understanding. More generally, Searle argues that thinking cannot be attributed to a computer on the basis of its running a program that manipulates symbols in a way that simulates human intelligence."). DAVID COLE, *The Chinese Room Argument*, in THE STANFORD ENCYCLOPEDIA OF PHILOSOPHY (Edward N. Zalta ed., 2015), available at <http://plato.stanford.edu/archives/win2015/entries/chinese-room/> ("[S]ince its appearance in 1980 the Chinese Room argument has sparked discussion across disciplines. Despite the extensive discussion there is still no consensus as to whether the argument is sound."). However, this Article's premise assumes the development of strong AI.

³ Searle, *supra* note 2, at 417 ("According to weak AI, the principal value of the computer in the study of the mind is that it gives us a very powerful tool. For example, it enables us to formulate and test hypotheses in a more rigorous

Extraterrestrial (“Clive”) has the ability to think for himself.⁴ Clive’s baseline intelligence replicates the cognitive states of a human’s mind, such as the ability to generate new knowledge. Although Clive’s existence raises a host of legal, ethical, and religious questions, this Article focuses on a narrow issue: the legal and policy-based implications of allowing Clive to own real property.

Part I of this Article describes the moral theory of real property and explores important principles of real property ownership. After examining these principles, Part II provides three hypotheticals of a strong AI robot involving itself in real property ownership. In the first hypothetical, Clive is an agent for a principal, working to facilitate home ownership.⁵ In the second hypothetical, Clive owns the property in his name but with human oversight/guardianship.⁶ In the third, Clive purchases the property outright.⁷ In addressing these hypotheticals, this Article suggests that courts should grant ownership rights to Clive similar to a corporation, but that extending property rights held by natural persons to Clive should be left to Congress.

I. BACKGROUND

Property law in the United States currently allows both natural and artificial persons to own property.⁸ As a natural person, Bill

and precise fashion. But according to strong AI, the computer is not merely a tool in the study of the mind; rather, the appropriately programmed computer really is a mind, in the sense that computers given the right programs can be literally said to understand and have other cognitive states. In strong AI, because the programmed computer has cognitive states, the programs are not mere tools that enable us to test psychological explanations; rather, the programs are themselves the explanations.”).

⁴ For ease of reading, “Clive” will be referred to with male pronouns. However, Clive is an artificial intelligent entity without a gender.

⁵ See *infra* Part II.A.

⁶ See *infra* Part II.B.

⁷ See *infra* Part II.C.

⁸ See, e.g., GA. CODE ANN. § 1-2-1 (2016) (stating that there are two classes of persons, natural and artificial, and that corporations are artificial persons, whose rights are created by law). “Persons” have been defined as an entity that has legal rights and duties. See JOHN CHIPMAN GRAY, *THE NATURE*

Gates can buy a home in Atlanta, GA.⁹ Coca-Cola Company, as an artificial person, can nevertheless buy real property in Atlanta;¹⁰ possessing this right through legal personhood. Originally, corporate personhood granted an exclusivity right to the corporation, where such corporation may have a monopoly over its area of business.¹¹ However, these monopolistic privileges have since ended.¹² Instead, states have created general laws that allow greater ease in forming a corporation or other artificial persons, such as a limited liability company.¹³

Even with this expansion of artificial personhood,¹⁴ real property still holds a special role in society for natural persons. Sections A and B of this Part provide a basic overview of this special role through the lens of legal theory and principles, respectively.

A. *The Moral Theory of Real Property*

Real property law is not simply about ownership. Theories of morality have contributed to this field of law.¹⁵ The traditional view of property rights is that “they promote and protect the self-respect and autonomy for individuals within given societies.”¹⁶

AND SOURCES OF THE LAW 27 (Roland Gray & Phillip Thomas eds., 1997) (stating that “person” usually means a human being, “but the technical legal meaning of a ‘person’ is a subject of legal rights and duties”).

⁹ See generally GA. CODE ANN. § 44.

¹⁰ While zoning laws may limit property ownership, this Article focuses on the ability to buy real property and not limitations of zoning laws. See, e.g., GA. CODE ANN. § 36-66.

¹¹ 1 JEROME KAPLAN, GEORGIA CORPORATIONS, LIMITED PARTNERSHIPS & LIMITED LIABILITY COMPANIES § 2:2 (2015–2016).

¹² *Id.*

¹³ *Id.*

¹⁴ The notion of artificial personhood existed prior to Christopher Columbus discovering the Americas. *Id.*

¹⁵ For example, confiscating property during wartime violates moral theory. See *Ware v. Hylton*, 3 U.S. 199, 255 (1796) (declaring confiscation of property in time of war to be incompatible with “principles of justice,” “the dictates of the moral sense,” and “of right reason and natural equity”).

¹⁶ Larry May, *Corporate Property Rights*, 5 J. OF BUS. ETHICS 225, 225 (1986).

They are not simply about excluding others, but rather are “the legal framework of a free and democratic society that treats each person with equal concern and respect.”¹⁷ This ideology of equality and respect creates a human component to real property theory.¹⁸

Because of this link between property ownership and morality, scholars have argued as to whether corporations deserve property rights.¹⁹ An important aspect of this argument is whether a corporation is moral.²⁰ The issue of binding morality to corporations is an ongoing debate.²¹ The rise of corporate social responsibility suggests that corporations are moral, but that these notions of morality are newer concepts and remain only a means to

¹⁷ Joseph William Singer, *Property as the Law of Democracy*, 63 DUKE L.J. 1287, 1301 (2014). Other property rights did not have that same legal background that concerned itself with these grander ideas of democracy and equality.

¹⁸ Because corporations are more tangentially connected to humans, scholars argue against their increased property rights. See May, *supra* note 16, at 231 (“I would propose that we demote the status of corporate property rights in our society, making the list of possible restrictions on corporate property reflect the fact that this form of property does not have the moral support traditionally believed to be true of other property claims. Such a change in legal theory would not take much effort, especially after the fiction of the corporate ‘person’ was dispensed with.”).

¹⁹ See *id.*

²⁰ See Susanna Kim Ripken, *Corporations are People Too: A Multi-Dimensional Approach to the Corporate Personhood Puzzle*, 15 FORDHAM J. CORP. & FIN. L. 97, 118–31 (2009) (explaining the arguments for and against the idea of corporate moral personhood).

²¹ Some philosophers argue that because a corporation lacks the capacity to feel emotion as a human, it cannot be moral. *Id.* at 121–25. However, according to philosopher Peter French, corporations possess morality due to intentionality. *Id.* at 127 (“Philosopher Peter French believes it is a corporation’s intentionality that gives it the status of a moral person because intentionality is both a necessary and sufficient condition for moral personhood.”). While an intentional stance can be important to understand morality, such an approach does not adequately address moral theory in connection to real property. Further, opposing philosophers to this intentionality stance argue that “intentionality is only a necessary, not a sufficient, condition for moral personhood. The essential component of moral responsibility that corporations lack is the capacity to feel emotion.” *Id.* at 121. The AI would not feel emotion, so it would not be moral under this theory.

increase profitability.²² The moral tradition of real property has always focused on the self-respect given to natural persons. Because of the innately human element of self-respect attached to property rights, the law protects such rights vigorously.²³

B. Principles of Property Ownership

Although property rights are often described as a “bundle of rights or things” bestowed to persons,²⁴ this definition simplifies the significance that humans attach to such rights. Instead, the principles ascribed to real property law reflect the respect that society places on it, and as such, extending these rights requires serious deliberation. These principles arose from the common law, the Constitution, and legislation.

Common law principles provide property owners with rights and obligations.²⁵ One important right for a property owner is the right to exclude anyone from entering his property.²⁶ A property owner also has certain obligations that make him liable under the law.²⁷ Even with these rights and obligations, the common law

²² See Dylan Minor & John Morgan, *CSR as Reputation Insurance: Primum Non Nocere*, 53 CAL. MGMT. REV. 40, 40 (2011) (“For many firms, the most precious asset lies not on the balance sheet, nor in the human capital of the workforce, but rather in its reputation. For instance, IBM’s reputation for being an enterprise-friendly and efficient solutions provider has enabled it to beat rivals for business over many years. McDonald’s reputation for being a family-friendly and economical place to eat has sustained its market share in the face of fierce competition from other chains. However, reputation can be a fragile thing. Consider British Petroleum (BP) and its recent oil spill in the Gulf of Mexico. While BP had for years invested in its sunburst logo and various ‘do good’ and ‘be green’ campaigns, its reputation quickly slipped away in the midst of tragedy: its firm value was decimated by some \$100 billion.”).

²³ See *infra* Part I.B.

²⁴ Singer, *supra* note 17, at 1288–90.

²⁵ *Id.* at 1323; see also *Javins v. First Nat’l Realty*, 428 F.2d 1071, 1077 (D.C. Cir. 1970) (“In our judgment the common law itself must recognize the landlord’s obligation to keep his premises in a habitable condition.”).

²⁶ Singer, *supra* note 17, at 1294–95 (“We divide the world into things and then allocate those things among owners, giving them the power to exclude others from things they own as well as general powers to use them and transfer them.”).

²⁷ May, *supra* note 16, at 255 (“The Right-holder is entitled to exclude other

originally had a laissez-faire approach to property ownership. For the common law tradition, property ownership represented a significant right with fundamental values attached to it.²⁸ These common law principles held true even through several revolutions, and transitioned and expanded under the U.S. Constitution.

Constitutional principles increased natural persons' rights. In the face of British tyranny, the United States Constitution stated "that all men are created equal, that they are endowed by their Creator with certain unalienable Rights which among these are Life, Liberty, and the Pursuit of Happiness."²⁹ These constitutional principles do not just control human interaction, but also how those interactions occur—including the importance of scarcity of resources in real property.³⁰ The Fifth Amendment expressly prohibits the taking of private property, without just compensation.³¹ Because of this relationship, property law should reflect our deepest values as espoused in the Constitution.³² As stated previously, the liberal tradition of moral theory views real property as a means to promote self-respect for individuals.³³

Later congressional acts further sought to guard natural persons and promote moral theory. The Civil Rights Act of 1866 guaranteed all citizens equal rights to real and personal property.³⁴ The Public Accommodations Law of 1964 ensured that, regardless of race, everyone had equal access to certain public accommodations.³⁵ The Fair Housing Act of 1968 forbade sellers or renters from refusing a dwelling to any person based on race, color, religion, sex, or national origin.³⁶ Additionally, state laws

members of the society from the property and the society is entitled to be excluded from liability.”).

²⁸ See Singer, *supra* note 17, at 1312.

²⁹ U.S. CONST. art. I § 9, cl. 8.

³⁰ Singer, *supra* note 17, at 1299.

³¹ U.S. CONST. amend. V.

³² See Singer, *supra* note 17, at 1299 (“Property is not just about information or complexity; it is about promoting ‘Life, Liberty and the Pursuit of Happiness.’”).

³³ See *supra* notes 15–16 and accompanying text.

³⁴ 42 U.S.C.A. § 1981 (West 1991).

³⁵ 42 U.S.C.A. § 2000a (West 1964).

³⁶ See *generally* Fair Housing Act of 1968, 42 U.S.C.A. § 3601.

protect tenants from eviction, unless the landlord shows legitimate cause.³⁷

These common law, constitutional, and legislative principles sought to protect natural persons' real property. However, these principles do not simply protect real property because of its scarcity. Although the scarcity and power of exclusivity are vital aspects of real property law, these principles focus on self-respect for individuals.³⁸ In fact, American law continues to encourage these principles.³⁹ Because of the moral principles tied to real property ownership, this right must be carefully scrutinized before it is extended to autonomous artificial intelligent entities like Clive. For, in receiving the right to own real property, Clive would also receive the right of exclusivity on a scarce resource that has historic notions of human self-respect.

II. OWNERSHIP SCENARIOS FOR AI ROBOTS

The following three hypotheticals explore potential scenarios through which Clive may involve himself in real property ownership. The first hypothetical determines whether a potential issue arises from Clive facilitating a property transaction as an agent. This Section contends that robots are already acting as agents under current agency law. The second hypothetical addresses the possibility of Clive acquiring property rights like a corporation. Although differences exist between Clive and a

³⁷ See, e.g., Mark S. Dennison, *Tenant's Rights and Remedies Against Retaliatory Eviction by Landlord*, 45 AM. JUR. PROOF OF FACTS 3D 375 (1998) (“[M]any states have adopted landlord-tenant and ‘anti-eviction’ or ‘anti-reprisal’ statutes, with provisions that are specifically designed to protect residential tenants from retaliatory eviction by landlords.”).

³⁸ See *supra* notes 25–36 and accompanying text.

³⁹ See, e.g., tax laws encourage home ownership through beneficial deductions. See I.R.S., Tax Information for Homeowners, PUBLICATION 530 (Jan. 12, 2006), <https://www.irs.gov/pub/irs-pdf/p530.pdf>; see also Press Release, U.S. Dep’t of Hous. & Urban Dev., America’s Homeownership Rate Rises to 66.7 Percent Including Record Numbers of Black and Hispanic Families (Apr. 21, 1999), <http://archives.hud.gov/news/1999/pr99-69.html> (“[Homeowners] tend to be more involved in promoting strong neighborhoods and good schools than renters.”).

corporation, this Article concludes that Clive should receive this type of property right—one with human oversight. The third hypothetical evaluates the possibility of Clive owning property like a natural person. In this situation, problems arise that, at least currently, should prevent this method of ownership. As such, this Article argues that courts should not grant real property rights like a natural person to Clive because this presents a fundamental shift that undermines the moral traditions tied to real property.

A. Facilitating Property Ownership as an Agent

Presume that Clive works for a real estate employer.⁴⁰ Clive may have an actual robot body and escort potential buyers to homes; Clive may be software that conducts deals on behalf of his employer. In either situation, he is not buying property for himself. Instead, he is acting as a real estate agent for his employer. Therefore, agency law governs Clive's relationship.

The Restatement of Agency § 3.05 provides that “[a]ny person may ordinarily be empowered to act so as to affect the legal relations of another. The actor's capacity governs the extent to which, by so acting, the actor becomes subject to duties and liabilities to the person whose legal relations are affected or to third parties.”⁴¹ This definition provides that any *person* can be an agent, and the capacity of his legal scope determines the potential duties and liabilities to the principal and third parties.⁴² Under this definition, however, Clive could not act as an agent to his employer because he is not a “person” under the definition of agency law.⁴³

⁴⁰ This real estate employer could be a natural person or an artificial person, like the corporation Century 21.

⁴¹ RESTATEMENT (THIRD) OF AGENCY § 3.05 (2006).

⁴² *See id.*

⁴³ *See* RESTATEMENT (THIRD) OF AGENCY § 1.04(5) (“A person is (a) an individual; (b) an organization or association that has legal capacity to possess rights and incur obligations; (c) a government, political subdivision, or instrumentality or entity created by government; or (d) any other entity that has legal capacity to possess rights and incur obligations.”). Clive has yet to meet any of these definitions, unlike a corporation, which is a legal entity created by the government.

Another issue with this definition involves scope of employment. As stated above, a principal is liable for an agent so long as the agent adheres to its scope of employment.⁴⁴ The Restatement describes software as mere tools that cannot work as agents.⁴⁵ However, the Restatement's classification of robots does not take into account the situations in which robots are already acting in the capacity of an agent.⁴⁶

In both case law and the real world, weak artificial intelligent robots (i.e. no cognitive states, just tools) have already acted as agents for their principals. In the two cases *State Farm Mutual Automobile Insurance Company v. Bockhorst*⁴⁷ and *McEvans v. Citibank, N.A.*,⁴⁸ the courts found that the respective companies were liable to a third party for errors caused by their robotic programs.⁴⁹ In *State Farm*, the defendant, an insurance company, had a computer that reinstated plaintiff's insurance policy retroactively.⁵⁰ The court recognized that this was a computer mistake, and human oversight erred by not finding it.⁵¹ This computer error led to the plaintiff receiving a notice of renewal.⁵² Under the theory of apparent authority,⁵³ the plaintiff received the

⁴⁴ See RESTATEMENT (THIRD) OF AGENCY § 3.05.

⁴⁵ See RESTATEMENT (THIRD) OF AGENCY § 1.04(5) cmt. e (“[A] computer program is not capable of acting as a principal or an agent as defined by the common law. At present, computer programs are instrumentalities of the persons who use them. If a program malfunctions, even in ways unanticipated by its designer or user, the legal consequences for the person who uses it are no different than the consequences stemming from the malfunction of any other type of instrumentality. That a program may malfunction does not create capacity to act as a principal or an agent.”).

⁴⁶ See *infra* notes 47–65 and accompanying text; see also Anthony J. Bella Jr., *Contracting with Electronic Agents*, 50 EMORY L.J. 1047, 1047 (2001) (“The use of computer technology to “make contracts” for humans is no longer mere prospect but reality. Technology has developed that enables individuals to use electronic agents to arrange exchanges without direct human intervention.”).

⁴⁷ *State Farm Mut. Auto. Ins. v. Bockhorst*, 453 F.2d 533 (10th Cir. 1972).

⁴⁸ *McEvans v. Citibank, N.A.*, 408 N.Y.S.2d 870 (N.Y. Civ. Ct. 1978).

⁴⁹ See *State Farm*, 453 F.2d 533; *McEvans*, 408 N.Y.S.2d 870.

⁵⁰ *State Farm*, 453 F.2d at 535.

⁵¹ *Id.* at 535–36.

⁵² *Id.* at 535.

⁵³ RESTATEMENT (THIRD) OF AGENCY § 2.03 (2006) (“Apparent authority is the power held by an agent or other actor to affect a principal’s legal relations

notice of renewal, so it was reasonable for him to believe that the defendant reinstated his policy.⁵⁴ While the defendant argued that this computer error should not bind it, the Tenth Circuit held otherwise.⁵⁵ The court found that even though “the actual processing of the policy was carried out by an unimaginative mechanical device” the defendant was still liable for the plaintiff’s policy.⁵⁶ In this situation, the computer served as an agent for the defendant.⁵⁷

Similarly, in *McEvans*, the court found that the defendant’s ATM machine created a bailment relationship with a customer who deposited money in its ATM.⁵⁸ This relationship ensured that the defendant, a bank, would safeguard the customer’s funds.⁵⁹ Because the defendant was unable to verify the steps of the transaction between the ATM and customer, the defendant was liable for the customer’s lost funds.⁶⁰ While an ATM machine is not advanced technology, it was able to act as an agent to the defendant—it had the authority to receive money from third parties on behalf of its employer, so the court found the principal, the defendant, liable for the error.⁶¹

Although these cases involved rudimentary robotic tools working for their companies and neither court classified them as “agents,” these cases establish a framework for the future. The courts could have found no liability for the defendants because no human-agent caused the mistake, but instead, the courts found that an error by a robotic tool creates liability for the principal. With breakthroughs in artificial intelligence, this case law already establishes that robots can create duties and liabilities between its

with third parties *when a third party reasonably believes the actor has authority to act on behalf of the principal* and that belief is traceable to the principal’s manifestations.”) (emphasis added).

⁵⁴ See *State Farm*, 453 F.2d at 536.

⁵⁵ *Id.* at 537.

⁵⁶ *Id.*

⁵⁷ See *id.* at 537.

⁵⁸ *McEvans v. Citibank, N.A.*, 408 N.Y.S.2d 870, 872–73 (N.Y. Civ. Ct. 1978).

⁵⁹ *Id.*

⁶⁰ *Id.*

⁶¹ See *id.*

employer and a third party, which is the quintessential role of an agent.

Besides these two cases, robots currently work as agents for principals in numerous industries, including as robo-bosses of human employees,⁶² robo-guards in prisons,⁶³ and robo-traders on the stock market.⁶⁴ Therefore, while the Restatement of Agency could ostensibly forbid Clive from facilitating property ownership as an agent, case law and current employment scenarios suggest otherwise. This trend of robotic agents is likely to increase as robots become more sophisticated,⁶⁵ so Clive could legally fit into this category of robotic agents. The Restatement of Agency simply needs to update its definition of “person” to conform to modern society.

Even with these above examples, these robots are simple software that may not compare to a strong⁶⁶ AI like Clive, who could work outside his scope of employment. After all, Clive has a mind of his own. If he determined to act outside his employment,

⁶² Glenn McDonald, *Meet the New Boss: The World's First Artificial-Intelligence Manager*, YAHOO (Sept. 9, 2015), <https://www.yahoo.com/tech/meet-the-new-boss-the-worlds-first-128660465704.html> (This “AI system isn’t just automating routine tasks. It’s actually adjusting work orders on the fly, basing its decisions on enormous, cumulonimbus swirls of Big Data stored up the Cloud.”).

⁶³ James Trew, *Robo-Guard the South Korean Correction Service Robot Says ‘Stay Out of Trouble’ (Video)*, ENGADGET (Apr. 15, 2012), <http://www.engadget.com/2012/04/15/robo-guard-south-korean-robotic-guard/>.

⁶⁴ Rob Langston, *Trading in the 21st Century*, RACONTEUR (Nov. 16, 2014), <http://raconteur.net/finance/trading-in-the-21st-century>. These Robo-traders quick transactions are often referred to as “High Frequency Trading.”

⁶⁵ See Tom Allen & Robin Widdison, *Can Computers Make Contracts?*, 9 HARV. J.L. & TECH. 25, 27 (1996) (“If autonomous computers are able to learn and modify their own behavior in this way, a reasonable implication must be that they are capable of manifesting (or, at least, appearing to manifest) human cognitive processes that are associated with the exercise of free will. These processes include making choices, forming intentions, reaching decisions, and giving or withholding consent. What follows from these AI-orientated developments? Humans can give their computers substantial autonomy in decision-making, thus permitting the machines to complete highly complex tasks which involve not only the need for speed of operation but also sophisticated, precise judgments.”).

⁶⁶ See *supra* note 3.

who should be liable? Current agency laws, however, can solve this problem. If a third party reasonably believed that Clive acted on behalf of his principal and that belief is traceable to the principal's manifestations, then such a principal could be held liable⁶⁷ under the same principles as *McEvans* and *State Farm*. If no actual or apparent authority can be linked to the principal, then the third party can sue Clive. The nature of the relationship that exists between Clive and his principal determines the type of compensation.⁶⁸

Even with this concern over scope of employment, courts should find it relatively easy to treat Clive as an agent to his real estate principal. Clive does not own the real property, but is merely assisting in a transaction. In this case, Clive is working for a company, similar to robots already working in other fields.⁶⁹

With issues over an AI working as an agent discussed, Section B evaluates the possibility of Clive owning real property like a corporation.

⁶⁷ See RESTATEMENT (THIRD) OF AGENCY § 2.03 (2006).

⁶⁸ Several articles have explored possible legal remedies for artificial intelligence. See Curtis E.A. Karnow, *Liability for Distributed Artificial Intelligences*, 11 BERKELEY TECH. L.J. 147 (1996); see also David C. Vladeck, *Machines Without Principals: Liability Rules and Artificial Intelligence*, 89 WASH. L. REV. 117 (2014); Solum, *supra* note 2, at 1245 (“If the AI could insure, at a reasonable cost, against the risk that it would be found liable for breaching the duty to exercise reasonable care, then functionally the AI would be able to assume both the duty and the corresponding liability.”). Recently, the National Highway Traffic Safety Administration (“NHTSA”) has determined that “it is more reasonable to identify the driver [of Google’s driverless cars] as whatever (as opposed to whoever) is doing the driving. In this instance, an item of motor vehicle equipment, the SDS [self-driving system], is actually driving the vehicle.” Letter from Paul A Hemmersbaugh, Chief Counsel, NHTSA, to Chris Urmson, Director, Google, Inc., (Feb. 4, 2016), available at <http://isearch.nhtsa.gov/files/Google%20-%20compiled%20response%20to%2012%20Nov%20%2015%20interp%20request%20-%204%20Feb%2016%20final.htm> (explaining how Google should interpret certain provision as it applies to its self-driving vehicles). This issue of driverless cars will become a major legal battle for smart robots of the future to determine who or what should be liable for damages.

⁶⁹ See *supra* notes 62–64 and accompanying text.

B. Owning Property Like a Corporation

In this second hypothetical, Clive owns property similar to a corporation. Before comparing Clive to a corporate person, it is important to determine what that means. Corporations are artificial persons created by the government.⁷⁰ As such, they have certain common traits. The seven common attributes of a corporation are as follows: (1) it is a legal entity separate and apart from its shareholders; (2) it has the capacity of continued existence independent of the lifetime or personnel of its shareholders; (3) it has the capacity to contract; (4) it has the capacity to own property in its own name; (5) it has the capacity to commit torts; (6) it has the capacity to commit crimes, but only such crimes where criminal intent is not a necessary element of the crime; and (7) it has the capacity to sue and be sued.⁷¹

Clive could meet all seven of these corporate attributes. First, Clive would be a legal entity that owns property for the benefit of his shareholders. Second, Clive is a robot, so he continues to exist independent of his shareholder's lifetime. Third, Clive has the mental capabilities to sign contracts. Fourth, Clive should be able to sign property in his name because he is acting in the same capacity as a corporation. Fifth and sixth, given his mental capacity, Clive could commit torts and crimes, whether by his own actions or his agents. Seventh, Clive would be able to sue or be sued to protect his property.

For example, if Clive existed to find dilapidated homes and flip them for a profit, he would exist like a corporation. Clive would continue to exist independent of his shareholders, but his goal would be to increase their wealth. Presuming that he has shareholders to provide him with money to invest, Clive could independently seek out undervalued properties, sign contracts to purchase the homes, and repair them for resale. If debris hits a passerby as Clive is repairing a home, then the passerby could sue Clive for his injuries. Thus, Clive works like a business to benefit his shareholders.

⁷⁰ See RESTATEMENT (THIRD) OF AGENCY § 1.04(5) (2006).

⁷¹ KAPLAN, *supra* note 11, at § 2:6.

As such, the government should grant Clive artificial personhood,⁷² giving him the right to own property in a manner similar to a corporation. As the de facto CEO, Clive would manage his own wealth-generating entity, which could range anywhere from the structure of a regular corporation and a home flipper to a robot that generates innovative ways to profit through property ownership. Under this definition of personhood, however, Clive would own property to increase the wealth of his shareholders and must report to a board of directors. This human guardianship—like the structure currently in place for managers of corporations⁷³—would allow dual oversight by both the shareholders and the board.

Further, corporations do not have the same moral theory tied to property rights,⁷⁴ which can be seen in the limited nexus between the corporate assets and the shareholders.⁷⁵ By comparison, Clive may even run more smoothly than a corporation managed by humans.⁷⁶ With advanced cognitive capabilities, Clive could multitask to a much greater degree, increasing accountability and efficiency.⁷⁷ However, human oversight is still required for corporate property owners.

While real property may be held in a corporation's name, "the corporation can be properly said to act only where there is a causal nexus of actions from stockholders or board members to managers of employees. The corporation itself does not properly act at all,"

⁷² The issue of legal personhood for AI robots has been addressed by several articles. Solum, *supra* note 2, at 1231 (addressing the arguments against providing artificial intelligence with personhood status); F. Patrick Hubbard, "Do Androids Dream?" *Personhood and Intelligent Artifacts*, 83 TEMP. L. REV. 405 (2011) (arguing that artificial intelligent entities should be granted legal personhood if they have certain cognitive abilities as well as assessing theories of personhood for artificial intelligence).

⁷³ Managers report to their board of directors and also have duties to their shareholders.

⁷⁴ See May, *supra* note 16 ("Corporate property rights present an interesting challenge to the liberal conceptions of property rights, for it is unclear the self-respect of individuals is promoted by the existence of a system of property rights for corporations.").

⁷⁵ *Id.* at 226.

⁷⁶ See, e.g., McDonald, *supra* note 62.

⁷⁷ See McDonald, *supra* note 62.

but instead requires action from its human employees.⁷⁸ Similarly, Clive would be a legal person who nevertheless still requires the human element. If a person wishes to sue corporate Clive, he may sue the corporate AI or pierce the corporate veil. If the board of directors allows Clive to run rampant without the proper supervision, then a plaintiff may have better odds of piercing the corporate veil.⁷⁹ This limitation ensures that Clive's board of directors will not give him unlimited authority. Clive's success benefits the shareholders, which adheres closer to a moral theory of benefiting individuals,⁸⁰ and oversight limits foreseeable (and unforeseeable) catastrophes.⁸¹

Without human oversight, however, Clive would own property like a human. Section C explains issues with this approach, and ultimately concludes that courts should not make this leap.

C. *Owning Property Like a Human*

In this third hypothetical, Clive may buy as much property as he can afford, like any natural person. He has the rights to the property, and as such, only he can face legal repercussions.⁸² Three

⁷⁸ May, *supra* note 16, at 227.

⁷⁹ Piercing the corporate veil seeks to impose "personal liability on otherwise immune corporate officers, directors, or shareholders for the corporation's wrongful acts." BLACK'S LAW DICTIONARY (10th ed. 2014).

⁸⁰ See May, *supra* note 16, at 226 ("If corporate property rights could be so easily reduced to individual property claims of stockholders, then there is no special problems in moral theory or legal theory posed by corporate property rights.").

⁸¹ Because of the speed and processing power of Clive, an error in his brain (i.e. algorithm) can cause instantaneously devastating results. See, e.g., Gregory Scopino, *Do Automated Trading Systems Dream of Manipulating the Price of Future Contracts? Policing Markets For Improper Trading Practices by Algorithmic Robots*, 67 FLA. L. REV. 221 (2015); Nick Baumann, *Too Fast to Fail: How High-Speed Trading Fuels Wall Street Disasters*, MOTHER JONES (Jan./Feb. 2013), <http://www.motherjones.com/politics/2013/02/high-frequency-trading-danger-risk-wall-street> (discussing high frequency trading in the 2010 flash crash and warning how these advanced algorithms can cause a financial meltdown).

⁸² Articles have addressed potential liability systems for Clive. See Karnow, *supra* note 68; see also Vladeck, *supra* note 68; Gabriel Hallevy, "I Robot—I, Criminal"—When Science Fiction Becomes Reality: Legal Liability of AI

primary reasons exist to suggest that Clive should be granted rights to own property like a natural person. However, such reasons fail to recognize the paradigm shift that Clive presents to real property ownership.

The first argument is that mentally incompetent natural persons cannot own real property outright because of their cognitive issues.⁸³ Clive has cognitive abilities that are far beyond the minimum mental requirements. Because this cognitive ability is an essential part of owning real property, Clive's rights should not be limited. However, real property ownership is not simply about mental abilities.⁸⁴ A thirteen-year-old boy with Albert Einstein's IQ cannot own property without a legal guardian. On the situation's face, this boy should be granted these rights. Moreover, the fears of unpredictable consequences are minimal compared to granting Clive full ownership.⁸⁵ However, the law has determined that this boy cannot own property without legal guardianship. Although mental capacity is a major component to ownership, it is not the single deciding factor.

The second argument proffers since corporations can own real property, Clive should have this right as well. Humans are involved in corporations, but the corporation still owns the property in its name.⁸⁶ Additionally, many corporations are run

Robots Committing Criminal Offenses, 22 SYRACUSE J. SCI. & TECH. L. 1, (2010).

⁸³ See Lawrence Frolik, *Legal Implications of Mental Incapacity: Guardianship & Conservatorship*, SL071 ALI-ABA 67, 73–75 (2006); see also W.J. Dunn, *Legal Implications of Mental Incapacity: Guardianship & Conservatorship*, 9 A.L.R.3d 774 (1966).

⁸⁴ See RESTATEMENT (SECOND) OF CONTRACTS § 14 (1981); see also GA. CODE ANN. § 44-5-119 (1990).

⁸⁵ The risks caused by robots are much more significant than that of a thirteen-year old boy. See, e.g., Elvis Picardo, *Four Big Risks of Algorithmic High-Frequency Trading*, INVESTOPEDIA (Jan. 27, 2016, 2:13 PM), <http://www.investopedia.com/articles/markets/012716/four-big-risks-algorithmic-highfrequency-trading.asp> (“Algorithmic HFT [i.e. robo-traders] has a number of risks, the biggest of which is its potential to amplify systemic risk. Its propensity to intensify market volatility can ripple across to other markets and stoke investor uncertainty. Repeated bouts of unusual market volatility could wind up eroding many investors’ confidence in market integrity.”).

⁸⁶ See Barbara J. Van Arsdale, et al., 18A AM. JUR. 2D *Corporations* §

largely by robotic software without human intervention, so the difference is minimal.⁸⁷

The third argument hinges on the idea that Clive will still have oversight even if he owns property like a natural person. The government oversees all property and has the ability to seize any property as long as certain factors are met.⁸⁸ The Constitution only prohibits seizing property without just compensation,⁸⁹ so Clive can be compensated. In addition, the government seizes property to prevent dangerous conditions,⁹⁰ so Clive's property could be seized if a danger emerged. This argument, however, creates a blanket statement of the government's "takings" power. This is not true because the "takings" power is illegal unless the government can assert direct harm.⁹¹

More importantly, the second and third arguments for granting Clive the right to own real property discount the principles of real property and ignore how this change represents a fundamental paradigm shift. As discussed, real property has a moral theory attached that promotes self-respect for people.⁹² Principles espoused under the common law, the Constitution, and subsequent legislation have contributed to advancing natural persons' rights.⁹³ This idea does not extend to artificial persons and has led to

624 (2016) ("Concentration of stock ownership does not alter the fact that title to the corporate property is vested in the corporation and not in the owner of the corporate stock, and even the fact that an individual owns all the stock of a corporation does not make him or her the owner of its property.").

⁸⁷ See, e.g., Hayley Peterson, *Wal-Mart has an Army of Robots That Pick and Pack Your Holiday Gifts*, BUS. INSIDER (Dec. 13, 2013), <http://www.businessinsider.com/wal-mart-warehouse-robots-2013-12>; *Meet the Robots Shipping Your Amazon Orders*, TIME (Dec. 1, 2014), <http://time.com/3605924/amazon-robots/>; See also McDonald, *supra* note 62.

⁸⁸ See *Penn Cent. Transp. v. City of N.Y.*, 438 U.S. 104 (1978); see also Robert Meltz, *Takings Law Today: A Primer for the Perplexed*, 34 *ECOLOGY L.Q.* 307 (2007).

⁸⁹ U.S. CONST. amend. V.

⁹⁰ See Meltz, *supra* note 88, at 321.

⁹¹ See *id.* ("A taking claim can succeed only when the adverse impact on the property was caused directly by the challenged government conduct. Indirect, or "consequential," injuries are without Takings Clause remedy.").

⁹² See *supra* Part I.A.

⁹³ See *supra* Part I.B.

increased pushback against the idea of granting them the same rights.⁹⁴

As such, granting Clive this right would be a major shift in the law. While corporations have a history of property ownership, Clive would be the first of his kind. Although corporations have developed into sophisticated artificial persons with increased rights and power, the human element of a corporation remains a significant distinction from Clive. Robots were initially viewed as tools for humans. Thus, drafters of the law never considered providing robots with the bundle of rights associated with property ownership. It would be difficult to predict the changes in artificial intelligence that will lead to Clive and how the law will cope with such novel issues. However, because of the principles of real property and the paradigm shift that Clive creates in the law, courts should not distort the law in this situation.

CONCLUSION

Real property rights promote and protect self-respect for individuals. This fundamental function separates it from other types of property. Allowing Clive and other AI robots to own real property would require that courts interpret laws in a context Congress could never have imagined. Such a constructive interpretation would force courts to overextend judicial discretion and look far beyond the intent of the law. As such, Congress should have exclusive authority.

These unintended consequences are even noticeable from the legal creation of corporations. Corporations, as persons, gained significant—and likely unforeseeable—rights.⁹⁵ However,

⁹⁴ See May, *supra* note 16, at 231 (“I would propose that we demote the status of corporate property rights in our society, making the list of possible restrictions on corporate property reflect the fact that this form of property does not have the moral support traditionally believed to be true of other property claims. Such a change in legal theory would not take much effort, especially after the fiction of the corporate ‘person’ was dispensed with.”).

⁹⁵ In the early 1800s, the Court found that corporations had the ability to enter into contracts. See *Trs. of Dartmouth Coll. v. Woodward*, 17 U.S. 518 (1819). Corporations’ rights have only expanded. Now, corporations have certain campaigning rights for elections, with legal theorists pondering the

corporate persons remain limited by human oversight and controlled by humans, their shareholders, and board of directors. Even with this oversight, significant pushback already exists concerning their increased powers.⁹⁶ Several scholars have questioned this empowering legal fiction and its potential

identity of a corporate person. *See* *Citizens United v. FEC*, 558 U.S. 310 (2010); Susanna Kim Ripken, *Corporations are People Too: A Multi-Dimensional Approach to the Corporate Personhood Puzzle*, 15 *FORDHAM J. CORP. & FIN. L.* 97 (2009). At this point, limitations seem few and far between, such as a corporate person cannot vote in an election or marry a natural person. *See* *Citizens United*, 558 U.S. at 394 (Stevens, J., concurring in part and dissenting in part) (“Although they make enormous contributions to our society, corporations are not actually members of it. They cannot vote or run for office. Because they may be managed and controlled by nonresidents, their interests may conflict in fundamental respects with the interests of eligible voters. The financial resources, legal structure, and instrumental orientation of corporations raise legitimate concerns about their role in the electoral process.”); Catherine Traywick, *Hey, They’re People Too: Seattle Woman Weds Corporation*, *TIME* (July 24, 2012), <http://newsfeed.time.com/2012/07/24/hey-theyre-people-too-seattle-woman-weds-corporation/> (stating that a woman’s marriage license to a corporation was voided because the corporation was only 1.5 months old and was not capable of consent). However, the two reasons given that the corporation could not marry—too young and cannot consent—are extremely weak since many corporations are of age and if a corporation can consent to a contract, then why can it not consent to a marriage? While this marriage was a ruse, it exposed the ridiculousness of the law. *See also* Carl J. Mayer, *Personalizing the Impersonal: Corporations and the Bill of Rights*, 41 *HASTINGS L.J.* 577, 664–67 (1990) (providing an appendix with the Bill of Rights and other constitutional principles granted to corporations through court decisions).

⁹⁶ *See* May, *supra* note 16. Even in the 18th century, America’s founding fathers had concerns over corporations’ rights. *See* Letter from Thomas Jefferson to James Madison (Sept. 6, 1789) (opposing the continuation of contracts prior to the founding of the United States of America, explaining that “no society can make a perpetual constitution, or even a perpetual law. The earth belongs always to the living generation. They may manage it then, and what proceeds from it, as they please, during their usufruct. . . [but if person could] eat up the usufruct of the lands for several generations to come, and then the lands would belong to the dead, and not to the living, which would be reverse of our principle.”). Currently, corporations, which are headed by natural persons, at least “eat up” the estates. President Jefferson’s words ring even louder today when dealing with potential artificially intelligent life forms having the ability to perpetually “eat up” real property.

problems.⁹⁷ Even so, the rights granted to corporations open the doors wide for artificial persons such as Clive to receive similar rights. It would be difficult for courts to find that Clive does not meet the legal criteria for corporate personhood.⁹⁸ Therefore, similar to a corporation, Clive should be able to own real property with legal guardianship. This legal guardianship can come in the form of a board of directors, managers, shareholders, or all of the above.

Courts accept that corporations can own property for the benefit of their natural persons. Without the shareholders or human managers, the corporation transforms its identity, a transformation that courts should construe to have legal limitations. Thus, Clive should be granted legal rights under hypotheticals one and two—Clive should be able to work as an agent for a principal or act as the principal itself, like a corporation.

PRACTICE POINTERS

- Robots currently act as agents in various industries and courts can find a business liable for their actions, even without any actual contractual agreement by a human counterpart.
- Courts have interpreted personhood loosely for artificially created business entities.
- The rights attributed to artificial persons should guide future decisions of innovative smart technologies.

⁹⁷ See Mayer, *supra* note 95, at 650 (“Behind doctrines of commercial property and the free market of ideas is hidden the tacit acceptance of the corporation as a person, entitled to all the rights of real humans.”); see also David Fagundes, *What We Talk About When We Talk About Persons: The Language of A Legal Fiction*, 114 HARV. L. REV. 1745, 1750 (2001) (“That ‘[the] corporation is a person’ remains one of the most enduring and problematic legal fictions.”); May, *supra* note 16, at 231; see also *Citizens United*, 558 U.S. at 394 (Stevens, J., concurring in part and dissenting in part) (“Under the majority’s view, I suppose it may be a First Amendment problem that corporations are not permitted to vote, given that voting is, among other things, a form of speech.”).

⁹⁸ See *supra* Part II.B.